

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER

DEC 12 2003

APPLICANT: JORG MULLER-ZILLER ET AL.)
 SERIAL NO: 10/056,578) Group Art Unit: 1742
 FILED: January 25, 2002) Examiner: S. Kastler
 FOR: ARRANGEMENT AND METHOD FOR)
 TRANSPORTING METALLIC WORK)
 PIECES, AND SYSTEM FOR HEAT)
 TREATMENT OF SAID WORK PIECES)

OFFICIAL

AFTER FINAL AMENDMENT UNDER 37 C.F.R. 1.116

Via Facsimile to 703-872-9311
 Mail Stop AF
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

In response to the Final Office Action mailed August 13, 2003, Applicants respectfully request the entry of the following amendment and remarks in the above-identified application.

I hereby certify that this amendment was facsimile transmitted to the United States Patent Office (Fax No. 703-872-9311) on

December 12, 2003
 (Date of Deposition)

Patricia A. [Signature]
 Director of the [Signature]
 [Signature] [Signature]

SWR-0076
 10/056,578

AMENDMENT TO THE CLAIMS:

1. (Currently Amended) An arrangement for transporting metallic work pieces, especially during a heat treatment process, comprising:
 - a heat-insulated transport chamber to hold the work pieces;
 - means for loading and unloading the work pieces; and
 - a transporting gear for moving the transport chamber,wherein the transport chamber can be moved horizontally, is designed to be vacuum-tight, and can be evacuated of air to create a vacuum to protect the work pieces from environmental influences;
 - wherein the transport chamber contains a horizontal batch loading and unloading device, and
 - wherein the transport chamber is provided with a heating element for heating the treatment chamber, and
 - wherein the transport chamber is equipped with a removable thermal insulation made of steel.
2. (Previously Presented) The arrangement in accordance with claim 1, further comprising a vacuum pump for evacuating the air from the transport chamber.
3. (Canceled)
4. (Canceled)
5. (Previously Presented) The arrangement in accordance with claim 1, wherein the transport chamber is equipped with a hermetically sealable loading door, which may be actuated via a drive mechanism.
6. (Previously Presented) The arrangement in accordance with claim 5, wherein the transport chamber is equipped with a hermetically sealable connecting door.
7. (Previously Presented) The arrangement in accordance with claim 1, wherein the transport chamber and the transporting gear can be moved relative to one another.
8. (Previously Presented) The arrangement in accordance with claim 7, wherein the transport chamber is positioned on the transporting gear such that it can pivot horizontally or can move in a straight line in a horizontal and/or vertical direction.
9. (Previously Presented) The arrangement in accordance with claim 1, wherein the transporting gear can rotate in place.

10. (Previously Presented) The arrangement in accordance with claim 1, wherein the transporting gear is rail-mounted, or can be controlled freely via induction loops embedded in the base.

11. (Currently Amended) A system for heat treating metallic work pieces comprising:

at least two treatment chambers for the horizontal acceptance of batches, in which the work pieces can be heat treated; and

an arrangement for transporting metallic work pieces can be coupled to the treatment chamber via a transfer canal that can be evacuated of air, the arrangement includes:

a heat-insulated transport chamber to hold the work pieces;

means for loading and unloading the work pieces; and

a transporting gear for moving the transport chamber,

wherein the transport chamber can be moved horizontally, is designed to be vacuum-tight, and can be evacuated of air to create a vacuum to protect the work pieces from environmental influences;

wherein the transport chamber contains a horizontal batch loading and unloading device, and

wherein the transport chamber is provided with a heating element for heating the treatment chamber, and

wherein the transport chamber is equipped with a removable thermal insulation made of steel.

12. (Previously Presented) The system in accordance with claim 11, wherein the transfer canal is connected to the treatment chamber in a stationary position.

13. (Previously Presented) The system in accordance with claim 11, wherein the transfer canal can be evacuated separately.

14. (Previously Presented) The system in accordance with claim 11, wherein the transfer canal is equipped with a drive mechanism, via which a loading door of the transport chamber may be actuated.

15. (Previously Presented) The system in accordance with claim 11, wherein the treatment chamber is a vacuum furnace, an atmospheric furnace, or a cooling chamber.

16. (Currently Amended) A method of transporting metallic work pieces during a heat treatment process, in which the work pieces are transported within a heat-insulated, horizontally movable transport chamber, between at least two horizontally loaded treatment chambers, in which the work pieces may be heat treated, the method comprising:

evacuating the transport chamber, which is designed to be vacuum-tight, of air, wherein the transport chamber is provided with a heating element for heating the treatment chamber, and wherein the transport chamber is equipped with a removable thermal insulation layer of steel;

creating a vacuum that will protect the work pieces from environmental influences;

transporting the work pieces within the vacuum from one treatment chamber to the next; and

holding the work pieces at the treatment temperature, without any significant drop in temperature.

17. (Previously Presented) The method in accordance with claim 16, further comprising coupling the transport chamber via a transfer canal to the appropriate treatment chamber.

18. (Previously Presented) The method in accordance with claim 17, further comprising evacuating the transfer canal separately.

19. (Previously Presented) The arrangement in accordance with claim 1, wherein the heating element is connected to an electrical power supply.

20. (Canceled)

REMARKS

Claims 1-2 and 4-20 are pending in the application. Claims 1, 11, and 16 have been amended, and claims 4 and 20 have been canceled, leaving claims 1-2 and 5-19 for consideration upon entry of the present amendment. Applicants respectfully request entry of the present amendment and remarks submitted herewith.

Applicants appreciate the Examiner's indication that claim 4 would be allowable if rewritten in independent form. Applicants have incorporated the limitation of claim 4 into all the independent claims. In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance.

Applicants further respectfully submit that this amendment merely cancels claims, adopts the Examiner's suggestion, removes issues for appeal, and/or places the claims in better form for consideration on appeal. Accordingly, it is respectfully requested that this amendment be entered, the application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: 

Lisa A. Bongiovi
Registration No. 48,933
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No. 23413

December 12, 2003